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ABSTRACT

Utilizing available 1966 statistical data and U.S. Census figures, the State of Arkansas was examined for purposes of analyzing: (1) the extent to which recent population gains in states such as Arkansas and Oklahoma is occurring in rural areas rather than as an extension of urbanization; (2) the extent to which U.S. manufacturing is beginning to deconcentrate by moving to rural areas outside the main manufacturing areas; and (3) the relationship between population gains in ostensibly rural areas and industrial location trends. Examination of migration patterns, employment variables, and industrial patterns revealed a net inmigration into 17 rural counties which had previously experienced population losses (1950-60) and a predominance of low wage/low skill industry in these counties. It was concluded that subsequent research might focus on: (1) barriers to industrialization (decreasing supplies of easily trainable labor, shortages of skilled labor, poor schools, unsophisticated community leadership, poor transportation facilities, underdeveloped amenities, and poor images) and (2) the "filtering down" process, wherein manufacturers rely on the existence of pools of low wage, surplus labor and have to move out of areas as the surplus disappears via competition with other, higher wage employers. (JC)

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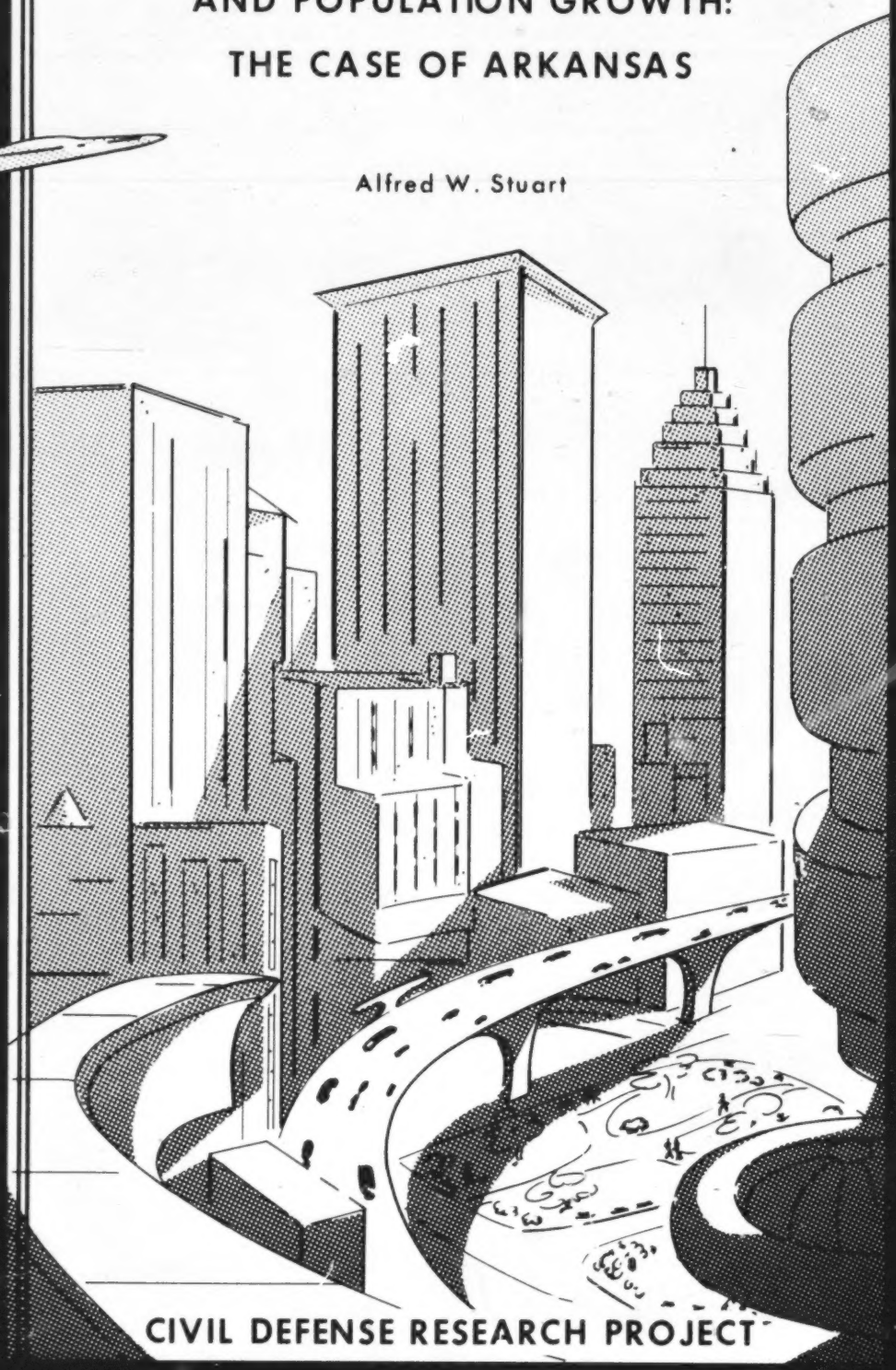
RURAL INDUSTRIALIZATION AND POPULATION GROWTH: THE CASE OF ARKANSAS

Alfred W. Stuart



CIVIL DEFENSE RESEARCH PROJECT

OAK RIDGE NATIONAL LABORATORY

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Civil Defense Research Project

RURAL INDUSTRIALIZATION AND POPULATION GROWTH: THE CASE OF ARKANSAS

by

Alfred W. Stuart

Work supported by the Department of Housing and Urban Development and the U. S. Atomic Energy Commission under Interagency Agreement No. IAA-H-28-69 AEC 40-192-69.

JUNE 1971

OAK RIDGE NATIONAL LABORATORY
Oak Ridge, Tennessee
operated by
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for the
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PREFACE

This document is one of a series which contains the results of research carried out during a 1969 Summer Study of Urban Decentralization at the Oak Ridge National Laboratory, sponsored by the Department of Housing and Urban development and the U. S. Atomic Energy Commission. The summary of the Summer Study is contained in "An Introduction to Urban Decentralization Research," ORNL-HUD-3.

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RURAL INDUSTRIALIZATION AND POPULATION GROWTH: THE CASE OF ARKANSAS

Alfred W. Stuart*

ABSTRACT

Population estimates for 1966 indicate that the massive outmigration of population from the nation's rural counties noted in the 1950-60 decade has diminished. During the same period, industrialization was proceeding at a relatively rapid rate in the more rural counties. The state of Arkansas was examined statistically in order to ascertain possible relationships between the two trends, in the hope that rural industrialization might offer an alternative to the inexorable growth of urban areas.

It was found that in Arkansas, industrialization in the state's most rural counties had indeed included a reversal of population patterns, resulting in net inmigration into 17 counties which in the previous decade had absolute losses of population. Towns and small cities played a smaller part in this relationship than had been expected.

Principal problems for further research, the conclusions of which could lay the basis for effective policy decisions, are the barriers to rural industrialization and the operation of a "filtering down" process which is apparently pushing low wage manufacturers into rural Arkansas.

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RURAL INDUSTRIALIZATION AND POPULATION GROWTH: THE CASE OF ARKANSAS

INTRODUCTION

The rapid rate at which the U. S. is becoming an increasingly urban nation has become a familar story. While central cities declined in some cases, metropolitan areas generally continued to grow relative to the national population. Induced decentralization is proposed as one alternative to the crowding, decline in services, and growth of slums which are generally regarded as consequences of this growth trend. Decentralization takes on many forms but a common thread among users of the term is the notion of providing people with alternatives to living in our present metropolitan areas. One aspect of this idea is to stem the flow of people to the cities at the source -- in the small towns and rural counties which do not possess the advantages and attractions of larger urban places. Proponents of a rural renaissance are concerned not only with easing the urban crisis but also with upgrading the nation's rural areas which are becoming backwaters of national development. The direct link between urban and rural problems was recognized as a matter for national concern by President Johnson in 1966.[1] This is coupled with a widely held belief that the nation's rural areas are depopulating in a manner that is both inexorable and inevitable. As the population decreases, there is a tendency to weaken existing service and employment levels, making it even more difficult to reverse the trend. Thus, a self-feeding mechanism of decline is established which produces both a deterioration of rural

life and further migration into the nation's larger cities. However, it may be unrealistic to relieve urban growth problems through attempts to keep Americans "back on the farm."

First, the farm is a significant alternative for few people. Large, highly organized and mechanized operations are generally the only ones which today produce a high standard of living. The small operator, the Jeffersonian-ideal yeoman farmer, is almost everywhere doomed to poverty.

Second, the complex, specialized and thereby interdependent, nature of modern urban-industrial systems requires a clustering of interacting components. Specialized production facilities depend upon various external economies which in turn require access to clusters of customers for their specialized services.

Thirdly, urban areas have well established head starts. Transport routes focus on them and skilled labor forces reside in them. Despite their problems, large urban areas have accumulated more of everything that is essential to an increasingly complex and technologically oriented production system. Thompson[2] speaks of a "rachet size" for cities, above which past growth is locked in and the future relatively assured but below which the future is uncertain. What are small towns and rural counties to expect? With poor schools, limited transport facilities, underdeveloped business services, unskilled labor, incompetent local governments, reduced tax bases and manifold other problems, how can small towns and rural areas possibly provide an alternative for many people?

In summary, it is argued that rural counties and small towns must be rejuvenated so as to stem the tide of migration into the cities but there are good reasons to believe that such an outcome is wishful thinking.

However, it is clear that much of the above and similar reasoning is based on events prior to 1960. What has happened in the decade of the 1960's? Does it support the trends of the 1950's? How do trends in population correlate with other variables, such as industrial growth? Those trends must be taken into account in any attempt to formulate a national decentralization policy.

TRENDS OF THE 1950's

In the 1950's about one-half of the nation's more than 3000 counties lost population. With few exceptions, these countries were largely rural.

An attempt to correlate fourteen variables, such as industrial growth and family income, with population change for nearly 2,500 non-metropolitan, non-New England counties (Table 1) failed to reveal any significant relationships during the 1950's. The main reason for this probably was the national scope of the data, which tended to obscure regional and local variations. The result suggests that smaller regional aggregates and case studies might be a more helpful approach.

TRENDS OF THE 1960's

The U. S. Bureau of the Census prepared estimates of population and its components of change for all counties as of July 1, 1966.[3] It was apparent that the estimates contained a dramatic story. The number of

Table 1. Correlation of Selected Characteristics with Percentage Population Change, 1950-60.* (Non-SMSA Counties Outside New England)

Variable	Correlation Coefficient
Urban Population (1960%)	-0.00
Negro Population (1960%)	0.03
Population over 65 years (1960%)	-0.01
No. School Yrs. Completed (1960)	-0.02
Employment in Mfg. (% 1960)	-0.01
Median Family Income ($1959)	-0.02
Public Assistance (No. Recipients 1964)	-0.03
Change Bank Deposits (% 1960-64)	-0.00
Federal Govt. Employment (No. 1964)	-0.01
Average Value of Farms ($ per acre 1964)	-0.00
Change Mfg. Employment (No. 1958-63)	-0.02
Change Mfg. Employment (% 1958-63)	0.00
Change in Land in Farms (% 1959-64)	-0.01

(none significant at the .01 level)

Sample size - 2,452 counties

*Data Source: 1967 County-City Data Book, U. S. Department of Commerce

counties experiencing population loss decreased from the 1,500 of 1950-60 to about 1,100. Primarily rural counties reduced their average annual rates of outmigration to only twenty percent of the 1950-60 level. The change becomes increasingly dramatic when it is realized that there were definite regional patterns. As Beale[4] pointed out, a line drawn from about Del Rio, Texas to the Upper Peninsula of Michigan separate counties of positive change from those of continued loss. Except in the core of the Appalachians and along the Southern Coastal Plain, many predominantly rural counties east of the line experienced gain instead of loss and in some cases, former heavy losers saw the tide of net migration reversed. Near-urban counties of the northeast, the Tennessee Valley, and the Carolina Piedmont were represented but so were a number of non-urban counties in Oklahoma and Arkansas. The West Coast also experienced gain but the broad interior of the continent west of the Del Rio--Michigan line continued to experience general population decline in the rural counties. Corry[5], analyzing rural population trends in the U. S. South for the 1920-1966 period, found that in his 15-state definition of the region, population in entirely rural counties (classified as less than 0.1 percent urban in 1960), after decreasing by over 700,000 persons between 1920 and 1960, actually increased by about 125,000 in the 1960-66 period. This change, along with expected increases in the more urban counties, was sufficient to more than restore the absolute losses suffered by Arkansas and Mississippi between 1950 and 1960. Only the chronically troubled state of West Virginia continued to lose population. Beale found that even those close to the scene in Arkansas were surprised by the dramatic reversal of trends.

Haren anticipated change in the South in a 1966 paper[6]. He grouped counties according to the population of the largest urban place in each and examined employment change in each group as revealed by County Business Patterns reports. He found that during the 1948-59 period, counties which did not contain a population center of at least 2500 persons experienced employment growth at a rate below that of the region as a whole. At the end of the period, only 4 percent of the region's nonagricultural employment growth reported in the CBP occurred in the rural counties. In the 1959-62 period, however, reported employment grew in the rural counties at a rate which slightly exceeded the region's. In the 1962-64 period, the rural counties' employment grew more than twice as fast as the region's. Ten percent of the region's growth occurred in rural counties. Not even the SMSA counties experienced employment growth at as high a rate as did the rural counties throughout the entire 1959-64 period.

Creamer[7] studied recent industrial location trends according to type of county. He found that the least urban and most dispersed type of counties (those outside major industrial areas, with fewer than 10,000 employees in manufacturing, and not containing a city of at least 100,000 persons) contained about 24.0 percent of all U. S. manufacturing employees in 1966, a percentage that has not changed much in several decades. However, this type of county experienced manufacturing employment growth which was greater than that of any other type of county in the 1963-66 period (Table 2). Growth by the least urban-most dispersed counties exceeded regional growth in regions which contained almost 86 percent of the U. S. total. In regions which

Table 2.* Manufacturing Employment Change by Type of U. S. County

Area		Counties with principal cities of industrial area	Satellite cities and remainder of industrial area	Other counties with cities over 100,000 but not in industrial area	Important mfg. counties out of industrial area with at least 10,000 mfg. employees but no city of 100,000	Remainder of U.S. not in ind. area; less than 10,000 mfg. employees; no city of 100,000	All Locations
U. S.	% share 1966	41.2	15.6	8.4	10.8	24.0	100.0
	% change 1963-66	9.6	10.0	11.8	13.7	16.9	11.9
New England	% share 1966	40.3	28.0	-	15.6	16.1	5.7
	% change 1963-66	5.0	2.9	-	10.0	19.0	7.2
Upper Mid-Atlantic	% share 1966	49.9	28.8	2.3	10.8	8.2	25.3
	% change 1963-66	5.6	6.3	12.4	13.3	14.0	7.4
Lower Mid-Atlantic	% share 1966	27.2	31.0	9.2	11.4	21.2	2.9
	% change 1963-66	13.4	6.1	12.7	13.8	10.0	10.3
Midwest	% share 1966	49.1	13.7	4.1	10.8	22.3	32.4
	% change 1963-66	12.2	20.2	14.6	16.5	18.6	15.2
Southeast	% share 1966	8.3	1.4	20.6	18.5	51.2	14.8
	% change 1963-66	13.5	27.6	13.9	11.5	19.2	16.2
South Central	% share 1966	8.2	4.2	13.1	2.9	71.6	2.3
	% change 1963-66	18.3	12.7	16.9	47.8	15.6	16.6
North Central	% share 1966	-	-	35.5	-	64.5	0.6
	% change 1963-66	-	-	2.8	-	11.2	8.1
Northwest	% share 1966	34.1	6.5	15.9	4.6	38.9	3.2
	% change 1963-66	20.1	16.8	-5.0	5.3	7.1	9.4
Southwest	% share 1966	56.1	7.0	16.4	2.9	17.6	12.8
	% change 1963-66	10.0	8.3	11.7	14.1	15.7	11.2

*Source: Creamer (1)

contained over 83 percent of U. S. manufacturing employment, the dispersed counties grew faster than the national rate of growth of all types of counties. This and the slow growth of major industrial areas in the U. S. manufacturing belt is the most dramatic trend revealed in Table 2.

The long term shift toward the more dispersed counties is modest and Creamer cautions against making the assumption that industrialization is about to provide a panacea for more dispersed and rural areas of the country. Lineback[8] provided a case study which tends to support Creamer's pessimism. He found that even after a relatively major and successful campaign to attract manufacturing to mountainous Alleghany County, North Carolina, population out-migration continued, although at a diminished rate.

However, data released after the completion of Lineback's study indicated that by 1968, Alleghany County experienced a very slight net inmigration, suggesting that a time lag of some magnitude exists between industrial growth and residential population change.

The combined work of Beale, Haren, Corry, and Creamer and their supporting data do suggest the development of a trend which, if major and if long-term, could be a major factor in the achievement of a national decentralization policy. However, many questions remain to be answered.

The particularly crucial and immediate questions seem to be the following:

(1) To what extent are recent population gains in states such as Arkansas and Oklahoma occurring in rural areas rather than as extensions of urbanization;

(2) To what extent is U. S. manufacturing beginning to deconcentrate by moving to rural areas outside the main manufacturing areas;

(3) What is the relationship between recent population gains in ostensibly rural areas and industrial location trends?

The above questions can be approached in several ways but the principal alternative seems to be between a nationwide investigation or one which concentrates on one or a few areas. The failure of the national level, 14-variable correlation attempt suggests that small area studies are apt to be more productive.

CASE STUDY OF ARKANSAS

Arkansas was selected for preliminary study of the questions stated above because it is a dramatic case of population trend reversal and because it is a heavily rural state which is well beyond the major concentrations of U. S. manufacturing activity. It should be emphasized that the study was based entirely on available statistical data and without benefit of special knowledge of the state or field work in the area.

In the 1950-60 decade, Arkansas suffered a 6.5 percent loss of population, largely because of a net outmigration of 22.7 percent of her population. Between 1960 and 1966, the trend reversed dramatically, with a 1.1 percent net inmigration contributing to an overall population increase of 9.5 percent.

Manufacturing employment has expanded rapidly since at least 1958, experienced an increase of 58.9 percent between 1958 and 1966, representing an addition of 52,225 jobs to the industrial base. While still not making Arkansas a major industrial state, manufacturing employment had reached the point that it involved 7.1 percent of the 1966 population.

The State in General

Attempts were made to find significant correlations between various employment and population variables in Arkansas. Percent of net migration or percent of total population change did not show significant correlation with various measures of change in manufacturing employment for several time increments going back as far as 1954 (Table 3).

However, when migration trends were aggregated for the 1950-60 and 1960-66 periods, it was found that population change, especially migration, responded in a modestly significant way to an increase in manufacturing employment (Table 4). The really interesting positive correlation was a very strong 0.82 correlation coefficient on a sample of 75 counties between the change in number of residents employed in manufacturing between 1950 and 1960 and the absolute change in population between 1960 and 1966. Clearly, many of the new workers are not living in the same county in which they work. An interesting condition is revealed: Some counties are growing in jobs faster than in population, others are growing faster in population than in jobs. Intercounty commuting apparently is a major characteristic of population responses to industrial growth in Arkansas.

Change by County Type

A question still remains as to the role of rural counties in the process of industrial growth and population change and it is this group that contains the evidence of the truly remarkable demographic change which occurred in Arkansas (Table 5). Between 1950 and 1960, every one of the 24 counties which were classified as completely rural by the U. S. Census had net outmigration and a decline in total population.

Table 3. Relationships Between Selected Employment Variables and 1960-66 Population Change in Arkansas Counties

Variables			Correlation Coefficient (All not statistically significant at the .01 level. n=75)
% net migration, 1960-66	vs.	% change mfg. emp. 58-66	0.02
"	vs.	% change mfg. emp. 58-63	0.19
"	vs.	% change mfg. emp. 54-66	-0.09
"	vs.	Change in no. residents in agr. 50-60	0.13
"	vs.	Change in no. mfg. emp. 63-66	0.07
"	vs.	Change in payroll per employee in mfg. 58-66	0.01
% total population change 1960-66	vs.	% change mfg. emp. 58-66	0.16
"	vs.	% change mfg. emp. 58-63	0.25
"	vs.	% change mfg. emp. 54-66	0.01

Table 4. Relationships Between Manufacturing and Population Change in Arkansas Counties

Variables			Correlation Coefficient Statistical significance at the .01 level. n=75	
			Significant	Not Significant
Sum of % pop. change 50-60 and 60-66	vs.	% change mfg. emp. 58-66	0.39	-
"	vs.	% change mfg. emp. 58-63	0.35	-
"	vs.	% change mfg. emp. 54-66	-	0.11
Sum of % net migration 50-60 and 60-66	vs.	% change mfg. emp. 58-66	0.45	-
"	vs.	% change mfg. emp. 58-63	0.35	-
"	vs.	% change mfg. emp. 54-66	-	0.14
"	vs.	Change in no. residents emp. in mfg. 50-60	0.43	-
"	vs.	Change in no. mfg. emp. 63-66	0.42	-
Change in number residents emp. in mfg. 50-60	vs.	Absolute change in pop. 60-66	0.82	-

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Table 5. Selected Population and Manufacturing Employment Characteristics of Arkansas Counties Grouped According to Size of Largest Urban Place

County Type	Pop. Change 50-60 %	Pop. Change 60-66 %	Migration 50-60 %	Migration 60-66 %	Total Pop. 1966	Mfg. Emp. 1966	Change Mfg. Emp. 58-66 %	No. of Counties
SMSA	6.8	10.8	-12.9	1.1	584,400	46,828	54.5	7
Town of 10,000-49,999	-4.2	7.9	-23.0	-1.4	441,900	33,371	64.2	9
Town of 5,000-9,999	-10.6	9.8	-24.8	3.9	433,900	34,578	49.5	17
Town of 2,500-4,999	-18.3	3.5	-31.6	-4.6	280,500	15,504	95.0	18
No towns of at least 2,500	-21.6	7.2	-31.6	2.7	215,200	10,030	89.6	24
STATE	-6.5	9.5	-22.7	1.1	1,965,000	140,311	58.3	75

In 1960-66, only four continued to lose population and 17 experienced net inmigration.

Curiously, the completely rural counties were the only ones which had both inmigration and industrial growth that exceeded state averages. In all other categories where inmigration exceeded the state rate, industrial growth was below the state's rate, but still quite strong. Where net outmigration occurred, the rate of industrial job increase exceeded the average for the state. Once again, intercounty commuting is probably responsible. In every case, industrial growth was strong and the flow of outmigration was greatly reduced, if not reversed.

The Census Bureau definition of rural is not always adequate. If a county which itself lacks any urban places is adjacent to an urban county then it can be said to be more urban/less rural than is a county which is adjacent to counties which lack urban places. On this premise, the Arkansas counties were grouped on the basis of both urban characteristics of the county itself and those of adjacent counties (Table 6). The most rural category contained those counties which lacked a town of 10,000 population and were not adjacent to counties which contained a town with a population of at least 10,000. While the results were not radically different from those using the Census definition of urban, it is interesting to note that only the most urban counties, those belonging to SMSA's, and the most rural had net inmigration during the 1960-66 period. Those counties which lacked a town of 10,000 but which were adjacent to counties which had such a town continued to experience a slight net outmigration of population but experienced an industrial employment gain of nearly 90 percent, slightly more than that

Table 6. Selected Population and Industrial Characteristics of Arkansas Counties Grouped According to Size of Largest Urban Place or Adjacency to County with Urban Place

County Type	Population Change 50-60 %	Population Change 60-66 %	Migration 60-66 %	Mfg. Emp. 1966	Change Mfg. Emp. 58-66%	No. of Counties
SMSA	6.8	10.8	1.1	46,828	54.5	7
Non-SMSA Town of 10,000-49,999	-4.2	7.9	-1.4	33,371	64.2	9
No town of 10,000 but adjacent to Co. with one	-15.4	6.0	-0.3	40,112	89.5	33
No town of 10,000 and not adjacent to Co. with one	-15.7	6.2	2.8	20,301	87.8	26
STATE	-6.5	9.5	1.1	140,311	58.3	75

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gained by the rural counties. By 1966, the 59 Arkansas counties which did not have a town of a population of at least 10,000 in them contained nearly 43 percent of the state's manufacturing jobs.

Those counties which contained towns with populations in the 10,000 to 49,000 range, while experiencing manufacturing growth above the state average within themselves as well as in adjacent counties, continued to show net outmigration during the 1960-66 period. This result would seem to cast doubt on the validity of the growth center concept.

Only the rural category of counties experienced net inmigration of population and industrial growth at rates which exceeded the state averages. Instead of small urban growth centers, what appears from the analysis is a number of relatively rural and isolated counties experiencing industrial growth, population gains, and even commuting of workers from adjacent counties. Coupled with this is industrial growth in towns and small cities which attracts commuting labor from adjacent counties.

As defined above on the basis of non-adjacency to counties with a town, there were 26 rural counties in Arkansas. These counties contained only 15 percent of the state's 140,000 manufacturing employees in 1966 so it would be ludicrous to claim that an industrial renaissance has swept rural Arkansas. Still, it is no mean fact that these same counties which had an absolute population decrease of nearly 16 percent during the 1950-60 decade not only experienced population growth during 1960-66 but actually underwent a net inmigration of nearly three percent. Lacking towns and given the demise of agriculture as an employer, there is no other possible general explanation for this dramatic change than

that of rural industrialization, coupled with an apparent willingness on the part of some people to return to a rural setting to live.

Industrial Patterns

The pattern of industry in the counties classified as completely rural by the Census was in 1963 that of low wage, low skill apparel makers and a furniture factory (Table 7). Additionally, there were resource oriented food processors and non-furniture wood industries.

The occurrence of low wage, labor intensive manufacturing in these rural counties raises the possibility that a "filtering down" process suggested by Thompson[2] may be occurring. That is, manufacturers who rely on the existence of pools of low wage, surplus labor are having to move on out of areas as the surplus disappears through competition with other, higher wage employers.

CONCLUSIONS

The Arkansas case study demonstrates that some industrialization is occurring in Arkansas and that it has an important, if not obvious, relationship with population change. Even though the amount of this industrialization is modest when viewed in the national context, it has been sufficient to induce a reversal of formerly negative migration trends. Rural industrialization may hold the possibility of helping to relieve some of the population pressure in our cities but more research will be required before a firm basis for public policy can be established.

Subsequent research might be focused on the barriers to rural industrialization and on the "filtering down" process. As for the barriers,

Table 7.* Economic Characteristics of Manufacturing Establishments in the Rural Counties of Arkansas, 1963

Industry (SIC)	Plant Size 100-249	No. of Employees 250-499	500-999	Average Annual Wage/Salary
Poultry Dressing (2015)	5	1	-	$2809
Men's Suits-Coats (2311)	1	-	-	2592
Men's Shirts (2321)	3	-	-	2592
Fabric Gloves (2381)	2	-	-	2486
Robes-Gowns (2384)	-	1	-	2486
Sawmill (2421)	2	-	-	3128
Hardwood Flooring (2426)	2	-	-	3215
Veneer-Plywood (2432)	1	-	-	3579
Upholstered Wood Furniture (2512)	-	1	-	3324
Miscellaneous Metal Work (3449)	1	-	-	3435
TOTAL	17	3	1	$2965
			Arkansas:	3868
			U. S.:	5890

*Source: 1963 Census of Manufactures

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Lonsdale[9] noted seven major categories of barriers to industrialization in largely rural Eastern North Carolina. They were: a decreasing supply of easily trainable labor, a shortage of skilled labor, poor schools, a lack of sophisticated community leadership, poor transportation facilities, underdeveloped amenities, and a poor image. Various efforts have helped reduce the intangible barriers and regional development programs, such as those of the Appalachian Regional Commission, may help to overcome some of the others, such as those related to transportation.

Experience from the Carolinas is also suggestive with respect to the "filtering down" process. The important concentration of textile manufacturing for which the Piedmont area of the Carolinas is noted seems to be undergoing such a process. A recent article in one of the regions' newspapers[10] points out that in Gaffney, South Carolina, a dramatic increase has occurred in machinery manufacturing and other industries which pay higher wages than do textiles. The long dominant textiles industry is responding to this trend, which is apparently general throughout Piedmont, in three very interesting ways. One, new kinds of labor markets are being developed, especially for Negroes. One Gaffney manufacturer is using a $274,000 grant from the U. S. Labor Department to train and hire 200 local disadvantaged persons. Already Negroes, who comprise 22 percent of the county's population, constitute more than 22 percent of the labor force in the county's textile plants.

Second, the textile industry is being pushed into higher degrees of mechanization and automation. The results are higher wages for a smaller labor force. Both adjustments, bringing Negroes into the

manufacturing labor force in a major way and increasing wage levels, indicate that the Piedmont area which initially experienced important industrial growth only when textile mills fled from New England in search of lower wage labor in the late 19th and early 20th century, are not experiencing more advanced levels in the filtration process.

Third, a number of textile and other relatively low wage employers, encouraged by state policy in North Carolina, are seeking new labor pools in largely rural parts of both the western mountains and eastern coastal plains of North Carolina. Small town-rural counties are suddenly undergoing what for them is an economic boom. As in Arkansas, many of the essentially rural counties of North Carolina have seen absolute population losses replaced by gains, including in some cases, net inmigration.

The continued operation of a "filtering down" process on through progressively more advanced stages cannot necessarily be assumed. The process itself needs to be more fully understood. With such knowledge, perhaps government policy could be shaped in such a way as to accelerate its operation.

Certainly rural industrialization is not a quick and easy solution to the problems of urban growth. However, it does hold promise of some relief and it could be a major tool in the effort to bring rural areas into the mainstream of American economic development. Such promise calls for further research to be conducted to provide the objective basis for action.

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